

Appl. No.: 10/799,702
In re FISHER et al.
Preliminary Amdt. dated May. 19, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for manufacturing a bevel gear member, said method comprising the steps of:

- a) providing a bevel gear blank ~~having a gearhead~~;
- b) forming gear teeth on ~~said gearhead of~~ said bevel gear blank by simultaneously cutting gear tooth top land, gear tooth side profile and a bottom land to form an unfinished bevel gear member; and
- c) machining at least one selected surface of said unfinished bevel gear member using said top lands of said gear teeth as a datum for centering said unfinished bevel gear member.

Claim 2 (original): The method for manufacturing the bevel gear member as defined in claim 1, wherein said bevel gear blank is a single-piece, unitary workpiece.

Claim 3 (original): The method for manufacturing the bevel gear member as defined in claim 2, wherein said unitary workpiece is formed by one of a forging and casing process.

Appl. No.: 10/799,702
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Claim 4 (currently amended): The method for manufacturing a bevel gear member as defined in claim 1, wherein said bevel gear blank ~~further~~ has a gearhead and a shaft coaxially extending from said gearhead.

Claim 5 (original): The method for manufacturing the bevel gear member as defined in claim 4, wherein the step of providing said unitary bevel gear blank includes the steps of:

forming a bevel gear workpiece having said gearhead and said shaft;

forming said unitary bevel gear blank by machining said shaft of said workpiece using a face angle surface of said gearhead of said workpiece as a locating surface for centering of said workpiece.

Claim 6 (original): The method for manufacturing the bevel gear member as defined in claim 5, wherein said bevel gear workpiece is formed by one of a forging and casing process.

Claim 7 (original): The method for manufacturing the bevel gear member as defined in claim 1, wherein said bevel gear member is a pinion gear member including a gearhead and a shaft having first bearing seat portion and a second bearing seat portion, and wherein the step of machining at least one selected surface of said unfinished bevel gear member includes the steps of machining at least one of said first bearing seat portion and said second bearing seat

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portion of said pinion gear member.

Claim 8 (original): The method for manufacturing the bevel gear member as defined in claim 1, wherein said bevel gear member is a ring gear member having an inner peripheral surface and a rear face surface, and wherein the step of machining at least one selected surface of said unfinished bevel gear member includes the steps of machining at least one of said inner peripheral surface and said rear face surface of said ring gear member.

Claim 9 (original): The method for manufacturing the bevel gear member as defined in claim 1, further including the step of hardening said bevel gear member using a heat treating process subsequent to the step (b) of forming gear teeth and prior to the step of (c) of machining at least one selected surface of said unfinished bevel gear member.

Claim 10 (original): The method for manufacturing the bevel gear member as defined in claim 1, wherein the step (b) of forming gear teeth is a face hobbing process.

Claim 11 (original): The method for manufacturing the bevel gear member as defined in claim 1, wherein the step (b) of forming gear teeth uses gear cutter blades each including a shank and a cutting member having a cutting edge having a first section extending from a distal end of said shank at a given axial pressure angle and dimensioned to cut at least one of

Appl. No.: 10/799,702

In re FISHER et al.

Preliminary Amdt. dated May. 19, 2005

side profiles of said gear teeth of said bevel gear blank, and a second section substantially perpendicular to a central axis of said cutter blade and dimensioned to cut at least a substantial portion of a top land of said gear teeth so that each of said gear cutter blades forms at least a substantial portion of said top land of said teeth of said bevel gear member simultaneously with said side profile thereof.